Patent claims

1. Device for manufacturing bundles (13) of wires (3) fixed in terminal boards (14), said wires having different cross-sections and insulation colours, whereby the colours are preferably in compliance with the standards of labelling wire types: phases, earth ducts, switch ducts etc. for building wiring, **characterized in that** it is made of a series (1) of reels (2) of wires (3), followed by a unit (4) for cutting off wires and stripping off insulation at the end of each treated wire (3), further follows a unit (5) for the distribution of unambiguous labels (6), preferably self-sticking labels, whereby a printer (5') is intended near this unit in order to provide printing of these labels (6), then there is a unit (7) for measuring the length of each treated wire (3), follows a winding unit (11), preferably with several sections (12) for separate winding of individual wires (3), which is followed by a section (13) for the formation of a bundle (14) of wires (3) running between the two junction points, e.g. between connection boxes, whereby near the section (13) there is foreseen a container (16) for standard terminal boards (15), especially for concealed installation tubes of various diameters and near it a distributor (17) of unambiguous labels (6) in an optional design, preferably as self-sticking labels, whereby there should be preferably a printer (17') near this unit and all the mentioned units are controlled by a computer program (10).
2. Device according to claim 1, **characterized in that** a unit (7) for measuring the length is conceived as a set of two parallel and touching cylinders (8), of which one cylinder (8) is equipped with a pulse generator (9), which are a basis for the computer program (10) for determination of a desired wire (3) length.

3. Device according to claims 1 and 2, **characterized in that** a section (13) for the formation of a bundle (14) of wires (3) is foreseen as a long field, on which the the bundle (14) of wires (3) is led into a terminal board (15) of wires (3), e.g. a flexible concealed tube, canal, cable tray, etc.

4. Device according to claim 3, **characterized in that** the bundle (14) is wrapped at least on several spots and labelled with an unambiguous label (6).

5. Device according to claims 1 to 4, **characterized in that** a computer program (10) defines adequate bundles (14) of wires (3) between the neighbouring junction points and foresees unambiguous labels (6) for each wire (3) end separately and for bundles (14), whereby the labels (6) of ends of neighbouring wires in the same junction points and foreseen for a joint connection are such to be recognized by a fitter without any knowledge of electricity.

6. Device according to claim 5, **characterized in that** the labels (6) of ends of various wires (3), which are foreseen for a joint connection, are the same.

7. Device according to claim 5, **characterized in that** the computer program (10) selects an optimal terminal board (15) with respect to the number of wires (3) in a bundle (14), e.g. a type of a concealed tube, and labels it with an unambiguous label (16).

8. Device according to claim 5, **characterized in that** the computer program (10) makes a list of junction elements, e.g. connection boxes and other electric installation elements, e.g. wall sockets, switches, fuses and the like by groups, linked to individual locations, e.g. in the kitchen, and gives them unambiguous labels (6).

9. Device according to claims 1 to 8, **characterized in that** illuminating bodies (17) are foreseen near reels (2) and types of terminal boards

(15), which are used by the computer program (10) to label each adequate wire (3) or terminal board (15), so the fitter does not need to be acquainted with the wiring diagram.

10. Method of manufacturing bundles of wires for building wiring, **characterized in that** the

first step (a) comprises precise measurement of lengths between the neighbouring junction points directly on the object on the basis of an electric plan and possible changes,

second step (b) comprising entering of these data into the computer program (10),

third step (c) comprises definition of wire (3) types by cross-sections, insulation colours in compliance with standards, their functions, e.g. phase, earth duct, switch wire, and the like,

fourth step (d) comprises assignment of each wire (3) to a corresponding fuse, junction units, e.g. connection boxes of the final consumer, e.g. lamp, wall socket, cooker and the like and its location, e.g. kitchen,

fifth step (e) comprises arrangement of bundles (14) of wires (3) fixed in terminal boards (15) manufactured by the device of the invention and labelled with an unambiguous label (6) and the respective electric installation elements, like connection boxes, switches by adequate locations in the building,

sixth step (f) comprises fitting of junction elements, e.g. connection boxes into prepared holes in the building and between them into the terminal boards (15) with bundles (14) of wires (3),

seventh step (g) comprises connection of ends of wires (3) in junction points on the basis of suitability of all unambiguous labels (6) at the ends of wires (3) and other elements without any knowledge of the wiring diagram.